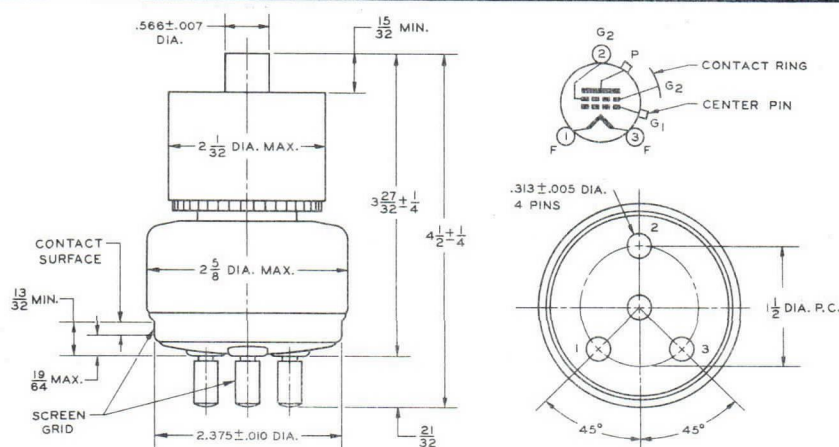




PL-4X500A

Power Tetrode



The PL-4X500A is an external-anode tetrode suitable for use as an RF amplifier and oscillator. The maximum plate dissipation rating for the tube is 500 watts. Because of its small size and low-inductance leads, the PL-4X500A can be operated efficiently over a large portion of the VHF region.

COOLING

A minimum air-flow of 40 cubic feet per minute must be passed through the anode cooler when the PL-4X500A is operated at full rated plate dissipation. At the specified rate of air flow the pressure drop across the cooler equals 1.4 inches of water. Forced-air cooling for the base and screen seals must also be provided. The temperature of the seals and the core of the anode cooler must not exceed 150° C. All cooling air must be applied before the application of filament voltage and must continue for three minutes after removal of power from the filament.

ELECTRICAL CHARACTERISTICS

Filament -- Thoriated Tungsten	
Voltage - - - - -	5.0 volts
Current - - - - -	13.5 amperes
Grid-Screen Amplification Factor - - - - -	6.2
Interelectrode Capacitances	
Grid-Plate - - - - -	0.05 μ f
Input - - - - -	12.8 μ f
Output - - - - -	5.6 μ f
Transconductance (2500 v. Eb, 200 ma. Ib, 500 v. Ec2) - - - -	5200 μ mhos
Maximum Frequency for Full Ratings - - - - -	120 Mc.

MECHANICAL CHARACTERISTICS

Base - - - - -	Special; see drawing
Maximum Overall Dimensions	
Length - - - - -	4.75 inches
Diameter - - - - -	2.63 inches
Net Weight - - - - -	1.2 pounds
Mounting Position - - - - -	Vertical, base up or down



PENTA LABORATORIES, INC.

312 NORTH NOPAL STREET • SANTA BARBARA, CALIFORNIA



PL-4X500A

MAXIMUM RATINGS — CCS (Continuous Commercial Service)

	Class-C CW or FM	Class-B TV Service	
D-C Plate Voltage	4000	3000	max. volts
D-C Screen-Grid Voltage	500	500	max. volts
D-C Plate Current	350	350	max. ma.
Screen-Grid Input	30	30	max. watts
Plate Dissipation	500	500	max. watts

TYPICAL OPERATION — Class C C-W or FM Amplifier Grounded-Cathode Circuit

D-C Plate Voltage	2500	3000	4000	volts
D-C Screen-Grid Voltage	500	500	500	volts
D-C Control-Grid Voltage	-150	-150	-150	volts
D-C Plate Current	310	310	315	ma.
D-C Screen-Grid Current	26	24	22	ma.
D-C Control-Grid Current	15	16	16	ma.
Peak R-F Grid Voltage (approx.)	230	230	230	volts
Driving Power (approx.)	5	5	5	watts
Plate Power Input	775	930	1260	watts
Plate Dissipation	300	330	425	watts
Plate Power Output	475	600	835	watts

TYPICAL OPERATION — Class C C-W or FM Amplifier Grounded-Cathode Circuit; Two Tubes in Push-Pull at 110 Mc.

D-C Plate Voltage	2500	3000	4000	volts
D-C Screen-Grid Voltage	500	500	500	volts
D-C Control-Grid Voltage	-250	-250	-250	volts
D-C Plate Current	690	600	625	ma.
D-C Screen-Grid Current	100	95	80	ma.
D-C Control-Grid Current	40	45	35	ma.
Driving Power (approx.)	20	18	25	watts
Power Output (approx.)	1300	1320	1850	watts

